RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: _10/699,562_
Source: _1Fwo_
Date Processed by STIC: _1/27/05_

ENTERED

IFWO

RAW SEQUENCE LISTING   DATE: 01/27/2005
PATENT APPLICATION: US/10/699,562   TIME: 10:43:17

Input Set : **A:\39754-0974A US saved January 12 2005.txt**
Output Set: **N:\CRF4\01272005\J699562.raw**

```
   4 <110> APPLICANT: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA
   5       JIANG, Tao
   6       TSIEN, Roger Y.
   8 <120> TITLE OF INVENTION: PEPTIDES WHOSE UPTAKE BY CELLS IS
   9       CONTROLLABLE
  11 <130> FILE REFERENCE: 39754-0974A US
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/699,562
  14 <141> CURRENT FILING DATE: 2003-10-31
  16 <160> NUMBER OF SEQ ID NOS: 49
  18 <170> SOFTWARE: FastSEQ for Windows Version 4.0
  20 <210> SEQ ID NO: 1
  21 <211> LENGTH: 6
  22 <212> TYPE: PRT
  23 <213> ORGANISM: Artificial Sequence
  25 <220> FEATURE:
  26 <223> OTHER INFORMATION: synthetic polypeptide
  28 <400> SEQUENCE: 1
  29 Pro Leu Gly Leu Ala Gly
  30  1               5
  33 <210> SEQ ID NO: 2
  34 <211> LENGTH: 7
  35 <212> TYPE: PRT
  36 <213> ORGANISM: Artificial Sequence
  38 <220> FEATURE:
  39 <223> OTHER INFORMATION: synthetic polypeptide
  41 <400> SEQUENCE: 2
  42 Glu Asp Asp Asp Asp Lys Ala
  43  1               5
  46 <210> SEQ ID NO: 3
  47 <211> LENGTH: 18
  48 <212> TYPE: PRT
  49 <213> ORGANISM: Artificial Sequence
  51 <220> FEATURE:
  52 <223> OTHER INFORMATION: synthetic polypeptide
W--> 54 <221> NAME/KEY: UNSURE
  55 <222> LOCATION: 8, 18
  56 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 58 <400> 3
W--> 59 Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg Arg Arg Arg Arg
  60  1               5                   10                  15
  61 Arg Xaa
  65 <210> SEQ ID NO: 4
  66 <211> LENGTH: 8
```

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RAW SEQUENCE LISTING   DATE: 01/27/2005
PATENT APPLICATION: US/10/699,562   TIME: 10:43:17

Input Set : A:\39754-0974A US saved January 12 2005.txt
Output Set: N:\CRF4\01272005\J699562.raw

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        67 <212> TYPE: PRT
        68 <213> ORGANISM: Artificial Sequence
        70 <220> FEATURE:
        71 <223> OTHER INFORMATION: synthetic polypeptide
        73 <400> SEQUENCE: 4
        74 Arg Arg Arg Arg Arg Arg Arg Arg
        75 1                5
        78 <210> SEQ ID NO: 5
        79 <211> LENGTH: 22
        80 <212> TYPE: PRT
        81 <213> ORGANISM: Artificial Sequence
        83 <220> FEATURE:
        84 <223> OTHER INFORMATION: synthetic polypeptide
W--> 86 <221> NAME/KEY: UNSURE
        87 <222> LOCATION: 1, 12
        88 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 90 <400> 5
W--> 91 Xaa Cys Arg Arg Arg Arg Arg Arg Arg Arg Arg Xaa Glu Glu Glu Glu
        92 1                5                10                15
        93 Glu Glu Glu Glu Glu Cys
        94              20
        97 <210> SEQ ID NO: 6
        98 <211> LENGTH: 17
        99 <212> TYPE: PRT
        100 <213> ORGANISM: Artificial Sequence
        102 <220> FEATURE:
        103 <223> OTHER INFORMATION: synthetic polypeptide
W--> 105 <221> NAME/KEY: UNSURE
        106 <222> LOCATION: 1, 7
        107 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 109 <400> 6
W--> 110 Xaa Cys Glu Glu Glu Glu Xaa Arg Arg Arg Arg Arg Arg Arg Arg Arg
        111 1                5                10                15
        112 Cys
        116 <210> SEQ ID NO: 7
        117 <211> LENGTH: 23
        118 <212> TYPE: PRT
        119 <213> ORGANISM: Artificial Sequence
        121 <220> FEATURE:
        122 <223> OTHER INFORMATION: synthetic polypeptide
W--> 124 <221> NAME/KEY: UNSURE
        125 <222> LOCATION: 12, 22
        126 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 128 <400> 7
W--> 129 Glu Glu Glu Glu Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg
        130 1                5                10                15
        131 Arg Arg Arg Arg Arg Xaa Cys
        132              20
        135 <210> SEQ ID NO: 8
```

RAW SEQUENCE LISTING   DATE: 01/27/2005
PATENT APPLICATION: US/10/699,562   TIME: 10:43:17

Input Set : A:\39754-0974A US saved January 12 2005.txt
Output Set: N:\CRF4\01272005\J699562.raw

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        136 <211> LENGTH: 19
        137 <212> TYPE: PRT
        138 <213> ORGANISM: Artificial Sequence
        140 <220> FEATURE:
        141 <223> OTHER INFORMATION: synthetic polypeptide
W-->    143 <221> NAME/KEY: UNSURE
        144 <222> LOCATION: 8, 18
        145 <223> OTHER INFORMATION: aminocaproic acid linker
W-->    147 <400> 8
W-->    148 Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg Arg Arg Arg
        149 1               5                   10                  15
        150 Arg Xaa Cys
        154 <210> SEQ ID NO: 9
        155 <211> LENGTH: 22
        156 <212> TYPE: PRT
        157 <213> ORGANISM: Artificial Sequence
        159 <220> FEATURE:
        160 <223> OTHER INFORMATION: synthetic polypeptide
W-->    162 <221> NAME/KEY: UNSURE
        163 <222> LOCATION: 21
        164 <223> OTHER INFORMATION: aminocaproic acid linker
W-->    166 <400> 9
        167 Glu Glu Glu Glu Glu Asp Asp Asp Asp Lys Ala Arg Arg Arg Arg Arg
        168 1               5                   10                  15
W-->    169 Arg Arg Arg Arg Xaa Cys
        170             20
        173 <210> SEQ ID NO: 10
        174 <211> LENGTH: 20
        175 <212> TYPE: PRT
        176 <213> ORGANISM: Artificial Sequence
        178 <220> FEATURE:
        179 <223> OTHER INFORMATION: synthetic polypeptide
W-->    181 <221> NAME/KEY: UNSURE
        182 <222> LOCATION: 9, 19
        183 <223> OTHER INFORMATION: aminocaproic acid linker
W-->    185 <400> 10
W-->    186 Glu Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg Arg Arg Arg
        187 1               5                   10                  15
        188 Arg Arg Xaa Cys
        189             20
        192 <210> SEQ ID NO: 11
        193 <211> LENGTH: 19
        194 <212> TYPE: PRT
        195 <213> ORGANISM: Artificial Sequence
        197 <220> FEATURE:
        198 <223> OTHER INFORMATION: synthetic polypeptide
W-->    200 <221> NAME/KEY: UNSURE
        201 <222> LOCATION: 18
        202 <223> OTHER INFORMATION: amiocaproic acid linker
```

```
                    RAW SEQUENCE LISTING              DATE: 01/27/2005
                    PATENT APPLICATION:  US/10/699,562    TIME: 10:43:17

                    Input Set : A:\39754-0974A US saved January 12 2005.txt
                    Output Set: N:\CRF4\01272005\J699562.raw

W--> 204 <400> 11
     205 Asp Asp Asp Asp Asp Asp Lys Ala Arg Arg Arg Arg Arg Arg Arg Arg
     206 1               5                   10                  15
W--> 207 Arg Xaa Cys
     211 <210> SEQ ID NO: 12
     212 <211> LENGTH: 23
     213 <212> TYPE: PRT
     214 <213> ORGANISM: Artificial Sequence
     216 <220> FEATURE:
     217 <223> OTHER INFORMATION: synthetic polypeptide
W--> 219 <221> NAME/KEY: UNSURE
     220 <222> LOCATION: 10, 13, 16, 19, 22
     221 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 223 <400> 12
W--> 224 Glu Glu Asp Asp Asp Asp Lys Ala Arg Xaa Arg Arg Xaa Arg Arg Xaa
     225 1               5                   10                  15
     226 Arg Arg Xaa Arg Arg Xaa Cys
     227               20
     230 <210> SEQ ID NO: 13
     231 <211> LENGTH: 24
     232 <212> TYPE: PRT
     233 <213> ORGANISM: Artificial Sequence
     235 <220> FEATURE:
     236 <223> OTHER INFORMATION: synthetic polypeptide
W--> 238 <221> NAME/KEY: UNSURE
     239 <222> LOCATION: 7, 23
     240 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 242 <400> 13
W--> 243 Glu Glu Glu Glu Glu Glu Xaa Pro Leu Gly Leu Ala Gly Arg Arg Arg
     244 1               5                   10                  15
     245 Arg Arg Arg Arg Arg Arg Xaa Cys
     246               20
     249 <210> SEQ ID NO: 14
     250 <211> LENGTH: 17
     251 <212> TYPE: PRT
     252 <213> ORGANISM: Artificial Sequence
     254 <220> FEATURE:
     255 <223> OTHER INFORMATION: synthetic polypeptide
     257 <400> SEQUENCE: 14
     258 Glu Glu Glu Glu Glu Glu Cys Arg Arg Arg Arg Arg Arg Arg Arg Arg
     259 1               5                   10                  15
     260 Cys
     264 <210> SEQ ID NO: 15
     265 <211> LENGTH: 7
     266 <212> TYPE: PRT
     267 <213> ORGANISM: Artificial Sequence
     269 <220> FEATURE:
     270 <223> OTHER INFORMATION: synthetic polypeptide
     272 <400> SEQUENCE: 15
```

```
      273 Glu Glu Glu Glu Glu Glu Cys
      274 1               5
      277 <210> SEQ ID NO: 16
      278 <211> LENGTH: 10
      279 <212> TYPE: PRT
      280 <213> ORGANISM: Artificial Sequence
      282 <220> FEATURE:
      283 <223> OTHER INFORMATION: synthetic polypeptide
      285 <400> SEQUENCE: 16
      286 Arg Arg Arg Arg Arg Arg Arg Arg Arg Cys
      287 1               5                   10
      290 <210> SEQ ID NO: 17
      291 <211> LENGTH: 11
      292 <212> TYPE: PRT
      293 <213> ORGANISM: Artificial Sequence
      295 <220> FEATURE:
      296 <223> OTHER INFORMATION: synthetic polypeptide
W--> 298 <221> NAME/KEY: UNSURE
      299 <222> LOCATION: 4, 10
      300 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 302 <400> 17
W--> 303 Glu Asp Ala Xaa Arg Arg Arg Arg Arg Xaa Cys
      304 1               5                   10
      307 <210> SEQ ID NO: 18
      308 <211> LENGTH: 16
      309 <212> TYPE: PRT
      310 <213> ORGANISM: Artificial Sequence
      312 <220> FEATURE:
      313 <223> OTHER INFORMATION: synthetic polypeptide
W--> 315 <221> NAME/KEY: UNSURE
      316 <222> LOCATION: 8, 15
      317 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 319 <400> 18
W--> 320 Glu Asp Asp Asp Asp Lys Ala Xaa Arg Arg Arg Arg Arg Arg Xaa Cys
      321 1               5                   10                  15
      324 <210> SEQ ID NO: 19
      325 <211> LENGTH: 23
      326 <212> TYPE: PRT
      327 <213> ORGANISM: Artificial Sequence
      329 <220> FEATURE:
      330 <223> OTHER INFORMATION: synthetic polypeptide
W--> 332 <221> NAME/KEY: UNSURE
      333 <222> LOCATION: 12, 22
      334 <223> OTHER INFORMATION: aminocaproic acid linker
W--> 336 <400> 19
W--> 337 Glu Glu Glu Asp Asp Asp Glu Glu Glu Asp Ala Xaa Arg Arg Arg Arg
      338 1               5                   10                  15
      339 Arg Arg Arg Arg Arg Xaa Tyr
      340               20
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 01/27/2005
PATENT APPLICATION: US/10/699,562   TIME: 10:43:18

Input Set : **A:\39754-0974A US saved January 12 2005.txt**
Output Set: **N:\CRF4\01272005\J699562.raw**

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:3; Xaa Pos. 8,18
Seq#:5; Xaa Pos. 1,12
Seq#:6; Xaa Pos. 1,7
Seq#:7; Xaa Pos. 12,22
Seq#:8; Xaa Pos. 8,18
Seq#:9; Xaa Pos. 21
Seq#:10; Xaa Pos. 9,19
Seq#:11; Xaa Pos. 18
Seq#:12; Xaa Pos. 10,13,16,19,22
Seq#:13; Xaa Pos. 7,23
Seq#:17; Xaa Pos. 4,10
Seq#:18; Xaa Pos. 8,15
Seq#:19; Xaa Pos. 12,22
Seq#:20; Xaa Pos. 17,29
Seq#:21; Xaa Pos. 16,32
Seq#:22; Xaa Pos. 19,26,50
Seq#:23; Xaa Pos. 11,19
Seq#:24; Xaa Pos. 8,16
Seq#:25; Xaa Pos. 13,22,33
Seq#:26; Xaa Pos. 17,24,45
Seq#:27; Xaa Pos. 15,22,40
Seq#:28; Xaa Pos. 17,24,39
Seq#:29; Xaa Pos. 3,4,5
Seq#:35; Xaa Pos. 3
Seq#:41; Xaa Pos. 2

VERIFICATION SUMMARY   DATE: 01/27/2005
PATENT APPLICATION: US/10/699,562   TIME: 10:43:18

Input Set : **A:\39754-0974A US saved January 12 2005.txt**
Output Set: **N:\CRF4\01272005\J699562.raw**

```
L:13 M:270 C: Current Application Number differs, Replaced Current Application Number
L:54 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:58 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3
L:59 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
M:341 Repeated in SeqNo=3
L:86 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:90 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:5
L:91 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:105 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:109 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6
L:110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:124 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:128 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7
L:129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
M:341 Repeated in SeqNo=7
L:143 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:147 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:8
L:148 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
M:341 Repeated in SeqNo=8
L:162 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:166 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9
L:169 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:16
L:181 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:185 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10
L:186 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
M:341 Repeated in SeqNo=10
L:200 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:204 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:11
L:207 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:16
L:219 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:223 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:12
L:224 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
M:341 Repeated in SeqNo=12
L:238 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:242 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
M:341 Repeated in SeqNo=13
L:298 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:302 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17
L:303 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:315 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:319 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18
L:320 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:332 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:336 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:19
L:337 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
M:341 Repeated in SeqNo=19
L:351 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
```

VERIFICATION SUMMARY   DATE: 01/27/2005
PATENT APPLICATION: US/10/699,562   TIME: 10:43:18

Input Set : **A:\39754-0974A US saved January 12 2005.txt**
Output Set: **N:\CRF4\01272005\J699562.raw**

```
L:355 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20
L:358 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:16
L:370 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:374 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:21
L:375 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
M:341 Repeated in SeqNo=21
L:391 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:395 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22
L:398 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:16
M:341 Repeated in SeqNo=22
L:414 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:418 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:23
L:419 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0
M:341 Repeated in SeqNo=23
L:433 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:437 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:24
L:438 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0
L:452 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:456 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:25
L:457 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0
M:341 Repeated in SeqNo=25
L:473 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:477 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:26
L:480 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:16
M:341 Repeated in SeqNo=26
L:494 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:498 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:27
L:499 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0
M:341 Repeated in SeqNo=27
L:515 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:519 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:28
L:522 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:16
M:341 Repeated in SeqNo=28
L:536 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:540 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:29
L:544 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:29
L:545 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0
L:622 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:626 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:35
L:627 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0
L:704 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:708 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:41
L:709 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:0
```